Converging Industries Research Foundation
Practical Solutions for Communications Policy

October 18, 2001

Magalie Roman Salas
Secretary
Federal Communications Commission
445 12th Street, SW
Room TW-B204
Washington, DC 20554

Dear Ms. Salas,

I am filing the attached research in my role as President of the Converging Industries Research Foundation (CIRF), formerly the Telecommunications Industries Analysis Project (TIAP). This is an information filing for the FCC's Federal-State Joint Board on Universal Service, Comments on Review of Lifeline and Link-Up Service for All Low-Income Consumers, CC Docket No. 96-45.

This filing consists of:

- *Closing the Gap: Universal Service for Low-Income Households:* A research paper that examines Lifeline service—monthly assistance to low-income households for basic telephone service.
- An executive summary.
- A resolution by the National Association of State Regulatory Commissioners (NARUC) that recommends this paper.

This research was produced by a neutral forum to assist policy makers in their decision making. This paper is intended to provide general public information and does not constitute or foretell the official position of any of the parties (agencies, companies, or individuals) who contributed to this paper.

In accord with the FCC guidelines, this filing has been submitted electronically.

Sincerely,

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President

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Closing the Gap: Universal Service for Low-Income Households

August 1, 2000

Presentation at the July 2000 NARUC Meeting
Los Angeles, CA

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Telecommunications Industries Analysis Project:

Calculations and Sources for Closing the Gap: Universal Service for Low-Income Households

Carol Weinhaus, Tom Wilson, Gordon Calaway, *et al.*
August 1, 2000

The Telecommunications Industries Analysis Project is associated with the Public Utility Research Center at the University of Florida College of Business Administration.

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States of America.

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List of State Names and Acronyms

(Alphabetized by State Name)

State Acronym	State Name
AL	Alabama
AK	Alaska
AZ	Arizona
AR	Arkansas
CA	California
CO	Colorado
CT	Connecticut
DE	Delaware
DC	District of Columbia
FL	Florida
GA	Georgia
HI	Hawaii
ID	Idaho
IL	Illinois
IN	Indiana
IA	Iowa
KS	Kansas
KY	Kentucky
LA	Louisiana
ME	Maine
MD	Maryland
MA	Massachusetts
MI	Michigan
MN	Minnesota
MS	Mississippi
MO	Missouri
MT	Montana
NE	Nebraska
NV	Nevada
NH	New Hampshire
NJ	New Jersey
NM	New Mexico
NY	New York
NC	North Carolina
ND	North Dakota
OH	Ohio
OK	Oklahoma
OR	Oregon
PA	Pennsylvania
PR	Puerto Rico
RI	Rhode Island
SC	South Carolina
SD	South Dakota
TN	Tennessee
TX	Texas
UT	Utah
VT	Vermont
VI	Virgin Islands
VA	Virginia
WA	Washington
WV	West Virginia
WI	Wisconsin
WY	Wyoming

Project Information

Background on the Telecommunications Industries Analysis Project

The Telecommunications Industries Analysis Project (TIAP), is a nine-year-old research forum that conducts and reports impartial research in the areas where network planning, business financials, and public policy (regulation and legislation) intersect. The participants actively work together to provide reliable data, clear analysis of major issues, and workable solutions for telecommunications policies. The goal is to meet the needs of customers, governments, and companies in a changing, competitive environment. This forum has facilitated dialogues on key issues, provided educational material, and produced leading edge research and widely-used tools for policy makers in government and in the communications industries.

The goal of the Project is to produce research and analysis that will assist policy makers in making informed decisions.

TIAP incorporates the following features:

- **Neutral setting**
  The Project provides a neutral setting, free of partiality, thereby ensuring objective and independent research.

- **Multiple viewpoints**
  Participants play an active role in the research and analysis, represent their own interests, and understand and assist in developing others' perspectives.

- **Analysis and results of alternatives**
  The Project provides research data, tools, and models for critical decision making.

- **Public distribution of research**
  Research is publicly available through the TIAP website.

I. Introduction

Objective of Paper

This paper answers two questions:

1. Are today's telephone support programs reaching their target of low-income households?

2. What helps low-income households take advantage of the available programs?

This paper looks at the relationship among U.S. households with telephones, low-income households, and government programs that support telephone service in low-income households. Comparisons on a state-by-state basis show basic patterns, including where to look for success in reaching low-income households.

Background

Section 254 of the *Telecommunications Act of 1996* requires a Federal-State Joint Board to review and recommend changes to the rules for universal service, including a definition of services that receive support.[1] At the same time, the *Act of 1996* requires that the Lifeline program, which provides monthly support to low-income households, continue. [2]

This paper provides information for policy discussions associated with support for telecommunications services for low-income households. These issues are of major importance to the nation. A connection to our nation's networks is the foundation for discussions on access to advanced technologies and on economic development—both nationwide and statewide. A connection is needed for access to emergency services and for access to employment.

Sources, Calculations, Assumptions, and Caveats

This paper focuses only on Lifeline support—a program that provides assistance to low-income households for basic telephone service. In addition to Lifeline, other programs exist that target individuals or households for support for telephone service, installation, or equipment. These programs assist low-income households, Americans with disabilities, and Native Americans.

This paper is a snapshot at the end of 1999. [3] Results based on data from a TIAP survey of all (100% response) states, the Federal Communications Commission, and other government agencies allows for nationwide comparisons.[4] For details on data, calculations, assumptions, and caveats, see the companion paper *Calculations and Sources for Closing the Gap: Universal Service for Low-Income Households*, (hereinafter referred to as *Calculations and Sources*).[5] The calculations omit Puerto Rico and the Virgin Islands and some states because data are unavailable or inconsistent.

I. Introduction, cont.

Research Summary: Basic Patterns

Where is the greatest need for support and how does it relate to income? This paper shows patterns for where the need is and what can be done to meet it.

Where is the support of overall telephone service needed?

- States that have relatively more low-income households have a lower percent of households with telephones.[6]

Do states with the greatest need use the available support programs?

- A state's relatively high or relatively low percent of low-income households does not affect the state's success in getting these households to subscribe to Lifeline service. [7]

Research: What Works?
Some states do better than expected: they have a relatively high percent of households with telephones despite their relatively high percent of low-income households.

What approaches increase the percent of low-income households with basic telephone service?

- **Increase Support:**
  An increase in the monthly amount of support per household above the minimum $5.25 generally increases the percent of eligible low-income households with telephone service (Lifeline service) by 7.0%—an increase from 9.5% to 16.5%.
- **Additional State Initiatives:**
  States with initiatives that go beyond the federal/state Lifeline requirements increase the percent of eligible low-income households with telephone service (Lifeline service) by 25.3%—an increase from 9.5% to 34.8%.
- **Combined Impact:**
  Taken together, these two factors increase the percent of eligible low-income households with telephone service (Lifeline service) by 32.3%—an increase from 9.5% to 41.8%.

The sections in this paper cover the following items:

- **Section II, What is the Impact of Income on Telephone Service?:** For each state, compares the percent of households with telephones with the percent of low-income households.
- **Section III, What is the Lifeline Take Rate?:** Defines and calculates the Lifeline take rate—the percent of total eligible households that subscribe to Lifeline service.
- **Section IV, Does a State's Need Affect the Lifeline Take Rate?:** For each state, compares the Lifeline take rate with the percent of low-income households.
- **Section V, Two Successful Approaches:** Examines the impact of two factors that increase the percent of eligible subscribers on Lifeline service.
- **Section VI, Other Approaches:** Describes factors that various states use to increase

the number of Lifeline customers or service to low-income households.

- **Section VII, Notes**

II. What is the Impact of Income on Telephone Service?

What are the Low-Income Support Programs?

Every state[8] has at least two major programs that provide assistance for telephone service to low-income households:

- Lifeline: Monthly support for basic telephone service.[9]
- Link Up: A one-time rate reduction for local telephone service installation.[10]

FCC rules establish guidelines for these programs, which may include contributions from states. Some states have additional initiatives to increase the number of Lifeline customers. These initiatives vary by state.[11] This paper focuses only on monthly support for basic telephone service (Lifeline) and not on installation (Link Up).

What Determines Eligibility?

FCC guidelines require states to use one or more of five general assistance programs to determine eligibility for Lifeline as well as Link Up support:

- Supplemental Security Income (SSI)
- Medicaid
- Food Stamps
- Energy Assistance Programs
- Public Housing

Participation in any of the above five general assistance programs qualifies an individual or household for Lifeline.[12] These are the FCC default rules. However, if a state sets its own guidelines, then it may pick one or more of the five programs to determine who qualifies. States may also add additional programs to determine Lifeline/Link Up eligibility. When a state has its own Lifeline program, the state rules must continue to meet the minimum federal requirements.

How Many U.S. Households have Telephones?

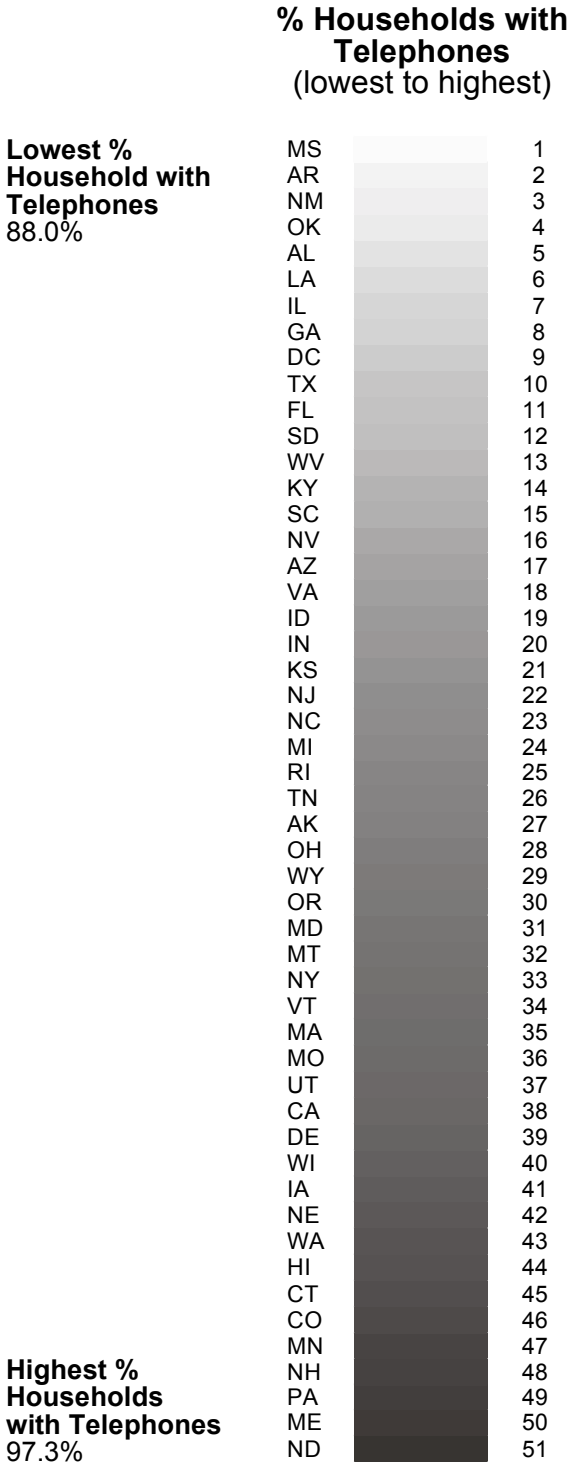
In order to answer questions about what should be done to ensure that everyone has access to basic telephone service, the first step is to answer the question, "Where is the help needed?" To answer this question requires a look at the overall picture, state by state. The percent of households with telephones for each state—the penetration rate—provides this overall picture of where help is needed.

Figure 1 ranks states by the percent of U.S. households with telephones in 1999. Mississippi (MS) has the lowest percent households with telephones (88.0%) and North Dakota (ND) has the highest (97.3%).[13] Mississippi ranks first (Rank 1) and North Dakota ranks last (Rank 51). Those states with lower telephone penetration rates indicate that a portion of the population needs to be reached.[14]

II. What is the Impact of Income on Telephone Service?, cont.

II. Figure 1

Figure 1: 1999 Telephone Percent Penetration by State



The shaded bars in this column indicate the amount of telephone penetration for each state. Mississippi (lightest bar) has the lowest percent penetration. North Dakota (darkest bar) has the highest percent penetration.

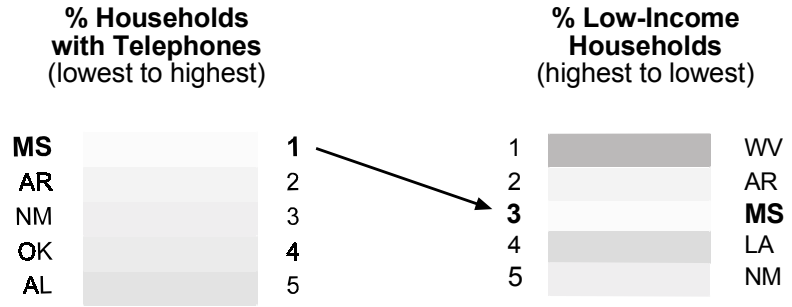
The left-hand column lists the acronym for the state name. The right-hand column gives the rank of percent of households with telephones. The central column indicates this rank by a shaded bar. A light shade means a relatively low percent of households with telephones and a dark shade means a relatively high percent of households with telephones. The convention of low percent/light shade and high percent/dark shade continues throughout the rest of the figures in this paper. As you move down the bar, the shaded scale automatically lets you see each state's percent and rank in relation to the rest. To increase telephone penetration, those states at the top of **Figure 1** need more help than those at the bottom.[15]

What is the Impact of Income on Telephone Service?

The relative number of low-income households is one factor that is related to how many households have telephones within a state. If a state has a greater percent of households with incomes of less than $10,000 per year, then the state is more likely to have a lower percent of households with telephones.[16] This percent is called the "penetration rate." The general pattern is: states with a greater share of low-income households have lower penetration of telephones.

Mississippi follows this pattern **(Figure 2)**. It moves from Rank 1 (low percent households with telephones) to Rank 3 (high percent of low-income households). This move in rank of **--**2 is not statistically significant. A state can move several places up or down in rank and still fit the pattern.

Figure 2: Mississippi Follows Pattern: Low Percent Penetration and High Percent Low-Income Households



II. What is the Impact of Income on Telephone Service?, cont.

Simply put, the general pattern is: if a state has relatively more low-income households, then it generally has a lower telephone penetration rate. This is what you would expect to find. High-income households can afford telephone service more readily than low-income households.

A statistical comparison of percent households with telephones, with percent low-income households, supports this general pattern. In 1999, for each 1% increase in low-income households within a state, the telephone penetration rate drops by approximately 1/3%. For each 1% increase at higher income levels ($40,000 or more), the telephone penetration rate increases by approximately 1/6%.[17]

If all states followed this pattern exactly, then a comparison of percent households with telephones (ranked lowest to highest) with percent low-income households (ranked highest to lowest) would produce two identical shaded columns. Both would have the lightest bars at the top, the darkest at the bottom, and the mid-range in the middle.

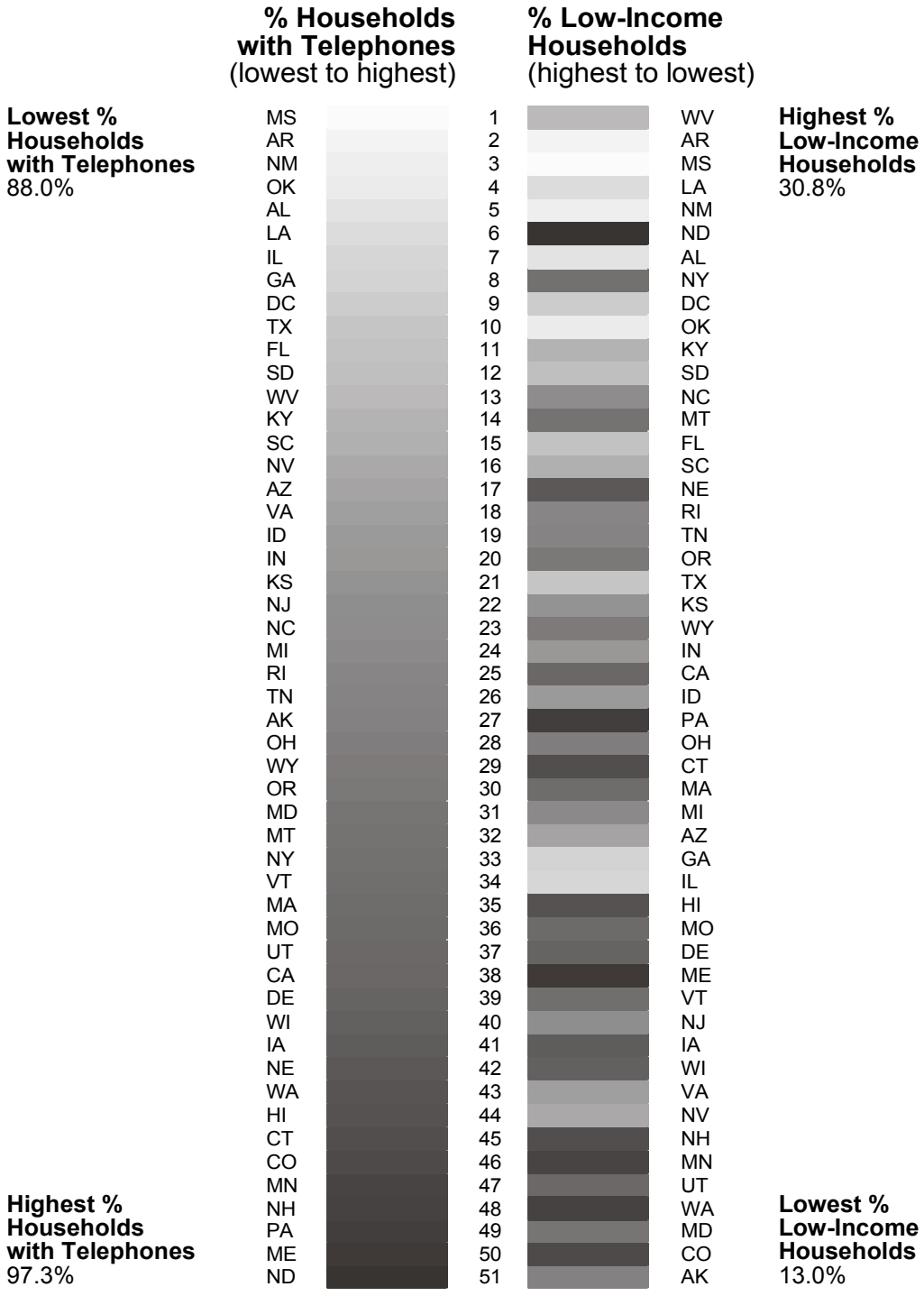
Figure 2 illustrates this pattern visually. The left-hand columns indicate Mississippi's Rank 1 for percent households with telephones and its associated bar (lightest shade of gray). The right-hand columns indicate that Mississippi moves down two places to Rank 3 for percent of low-income households. Even though the rank changes, Mississippi retains its original light gray shade. Visually, not much changes. Most of the top ranked states in both columns have light gray bars. Only West Virginia breaks from the pattern. From left to right, it jumps up 12 places in rank—a significant jump.

Figure 3 shows the result of comparing percent households with telephones to percent low-income households. Each state retains its telephone penetration shade. If the two sets of numbers shared a perfect relation—a perfect correlation—, then the column on the right would be identical to the one on the left. It isn't. Some of the shaded bars leap out. These indicate states that break from the basic pattern. This visual comparison highlights exceptions at a glance.

In **Figure 3**, a jump in rank of at least 10 or more from the left shaded column to the right one indicates that other factors influence the percent of households with telephones. States that move up by a big jump do better than expected. They have a high telephone penetration. These states are success stories. These are the states where the Lifeline support programs are working. They have a high percent of households with telephones even though they have a relatively high percent of low-income households. So a dark bar at the top of the right-hand shaded column means that a state is doing better than expected. A light bar at the bottom indicates the reverse.

II. Figure 3

Figure 3: 1999 Comparison of Telephone Penetration with Low-Income Households



In general, states with a greater share of low-income households have lower penetration of telephone service. In 1999, for each 1% increase in low-income households within a state, the percent of households with telephones—the penetration rate—drops by approximately 1/3%.

II. Figure 3

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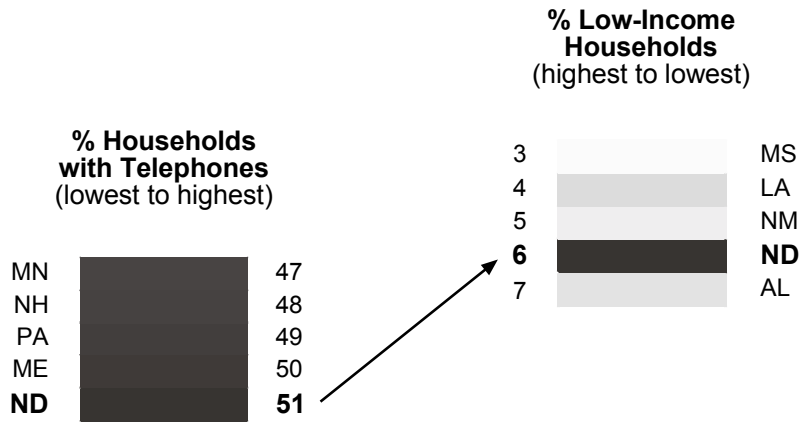
These are the states with the largest jump in rank in **Figure 3**:

High % Households with Telephones and High % Low-Income Households	
States with a High Jump in Rank	**Amount of Jump in Rank**
ND	45
NE	25
NY	25
PA	22
MT	18
CT	16
CA	13
ME	12
WV	12
NC	10
OR	10

In these states, other factors besides percent of low-income households may affect percent penetration. Reasons for success vary in these states. See **Section VI** for a discussion of these factors. **Figure 4** illustrates one success story. North Dakota (ND) jumps up 45 places (from Rank 51 to Rank 6). It has higher penetration (97.3%) than would be expected with its high percent of low-income households.

Figure 4: North Dakota Success Story: Higher Percent Penetration than Expected with Its High Percent Low-Income Households



II. What is the Impact of Income on Telephone Service?, cont.

III. What is the Lifeline Take Rate?

What is the Lifeline Take Rate?

The basic pattern of high percent low-income households/low percent households with telephones shows there's a need for Lifeline service. The next step is to see if this need is met. Does everyone who's eligible take advantage of the available Lifeline services?

The "Lifeline take rate" is the percent of total eligible households that subscribe to Lifeline service.[18] Calculations for the Lifeline take rate for each state require the:

- **Number of Lifeline Households**
  Each eligible household gets one subscription to Lifeline service.[19]

- **Number of Total Eligible Low-Income Households**
  This paper uses a *minimum* total number for eligible low-income households. Since many households are eligible for more than one of five general low-income assistance programs, adding these together overstates the number of eligible Lifeline households. [20] To avoid double counting, this paper uses the general assistance program with the largest percent of households to set the *minimum* number of federally eligible Lifeline households.

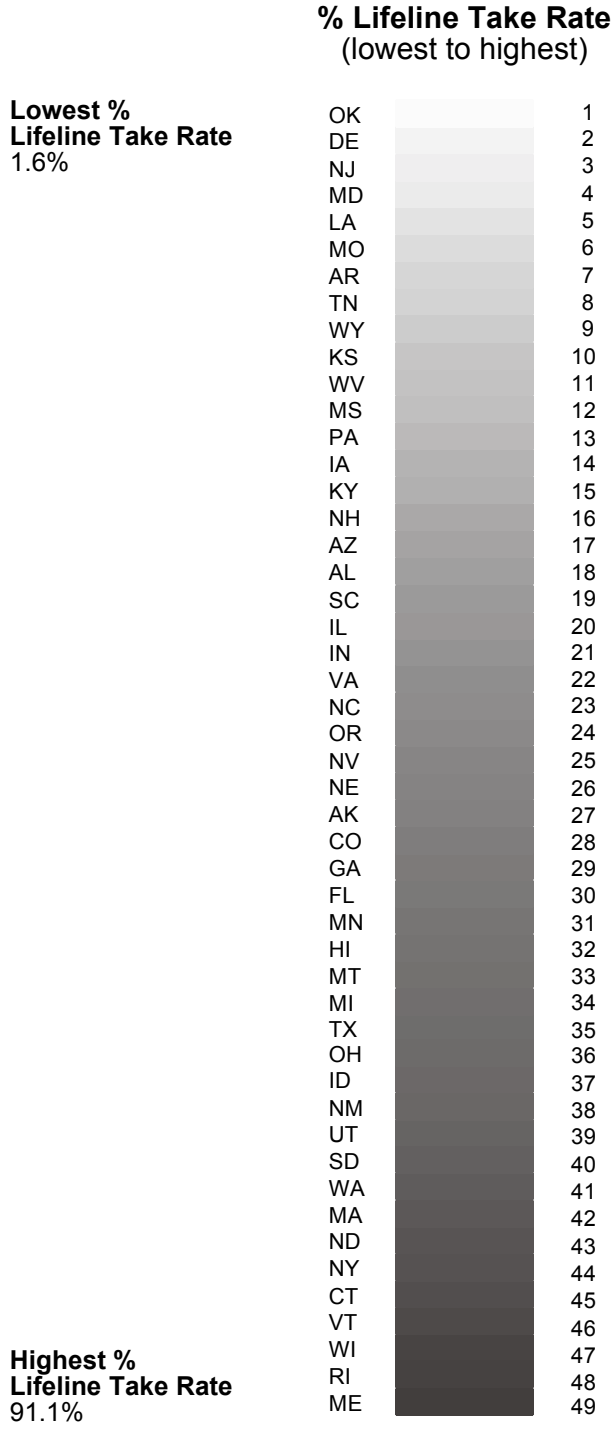
The Lifeline take rate is an approximate measure of how many eligible customers get the assistance they need. [21]

Figure 5 ranks the states by their Lifeline take rate. Oklahoma (OK) has the lowest percent take rate at 1.6% and Maine (ME) has the highest percent take rate at 91.1%. In this case the light bars indicate a low percent take rate and the dark bars indicate a high percent take rate.

Since the calculations understate the total number of eligible households, two states—California and the District of Columbia—have Lifeline take rates over 100%. For this reason, the calculations that use the take rate omit California and the District of Columbia because they mask basic patterns.[22]

III. Figure 5

Figure 5: 1999 Calculated Lifeline Take Rate by State



Omits CA and DC whose Lifeline take rates mask the basic pattern.

The shaded bars in this column indicate the percent of eligible Lifeline customers in each state that subscribe to this service. Oklahoma (lightest bar) has the lowest percent penetration. Maine (darkest bar) has the highest percent penetration.

IV. Does a State's Need Affect the Lifeline Take Rate?

Does a State's Need Affect the Lifeline Take Rate?

The Lifeline take rate—the percent of eligible customers that subscribe to Lifeline service—provides a way to examine the impact of various factors. The first question is "Does a state's need affect the Lifeline Take Rate?" In other words, if a state has a relatively high or relatively low percent of low-income households, does this affect the state's success in getting these households to subscribe to Lifeline service?

The answer to this question is: "No." There is no relation between percent of low-income households and percent Lifeline take rate **(Figure 6)**.[23] If a relation existed between percent low-income households and percent Lifeline take rate, then both columns in **Figure 6** would show a pattern. This pattern would produce two similar bars with some variations, such as seen in **Figure 3**. Instead, **Figure 6** shows no pattern; the shadings in the right-hand column are random.

So something more is going on. Other factors explain the reason some states have larger take rates. For example, those states who did better than expected in **Figure 3** had the highest jumps in rank (high percent households with telephones and high percent low-income households). These are the success stories. A comparison of their Lifeline take rates with the remaining states shows these states do a better than average job of getting eligible Lifeline customers to subscribe.

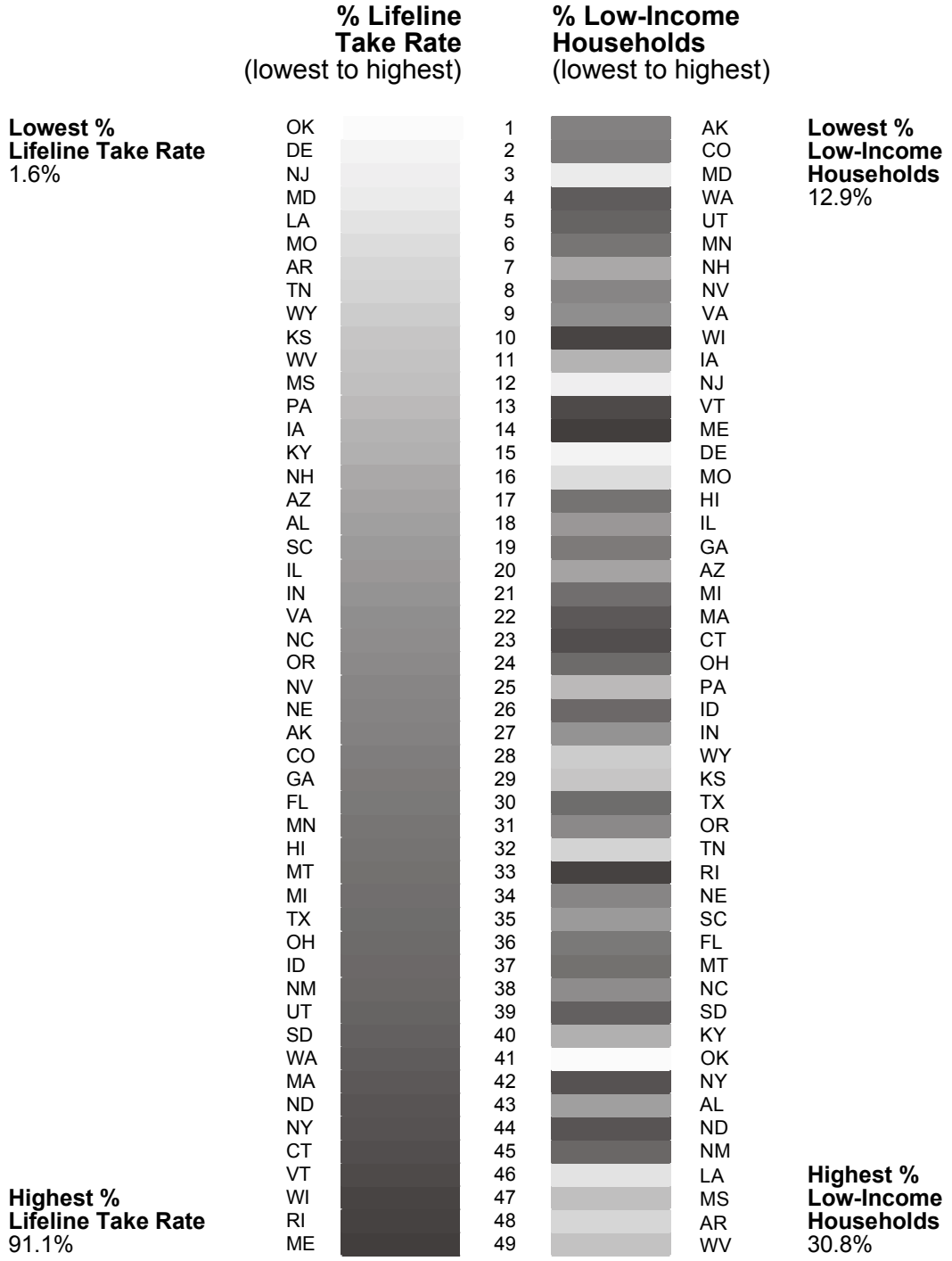
High % Households with Telephones and High % Low-Income Households		**Lifeline Take Rate**	
States with a High Jump in Rank	**Amount of Jump in Rank**	**Percent**	**Average Percent***
			32.4%
ND	45	49.1%	
NE	25	16.2%	
NY	25	53.1%	
PA	22	6.6%	
MT	18	20.6%	
CT	16	53.2%	
ME	12	91.1%	
WV	12	6.3%	
NC	10	13.4%	
OR	10	14.5%	
Remaining States			19.1%

*Omits CA and DC because they mask the basic pattern. With the addition of CA and DC, the average Lifeline take rates are 44.9% for states with a high jump up in rank and 21.9% for the remaining states.

IV. Does a State's Need Affect the Lifeline Take Rate?, cont.

IV. Figure 6

Figure 6: 1999 Comparison of Lifeline Take Rate and Low-Income Households



Omits CA and DC whose Lifeline take rates mask the basic pattern.

The percent of low-income households has neither a positive nor a negative impact on the Lifeline take rate. If a relation existed, then both columns would be similar; instead the shadings in the right-hand column are random.

V. Two Successful Approaches

Two Successful Approaches

The reason why a particular state is successful varies. This section gives two reasons why a state may have a larger Lifeline take rate:

- The impact of the amount of Lifeline support.
- The impact of state initiatives that go beyond the Federal/State Lifeline guidelines.

What is the Impact of the Amount of Lifeline Support?

One way to increase the number of low-income households with telephone service is to offer more than the minimum Federal support.

A pattern emerges when you compare different amounts of support given to reduce the monthly price of basic telephone service for low-income households **(Figure 7)**. Calculations use three groups:

- $5.25 (the minimum level of support),
- More that $5.25 and less than $10.50, and
- $10.50 or more.

The pattern is: if a state increases the minimum amount of Lifeline support, then the percent of eligible households subscribing to Lifeline service increases.

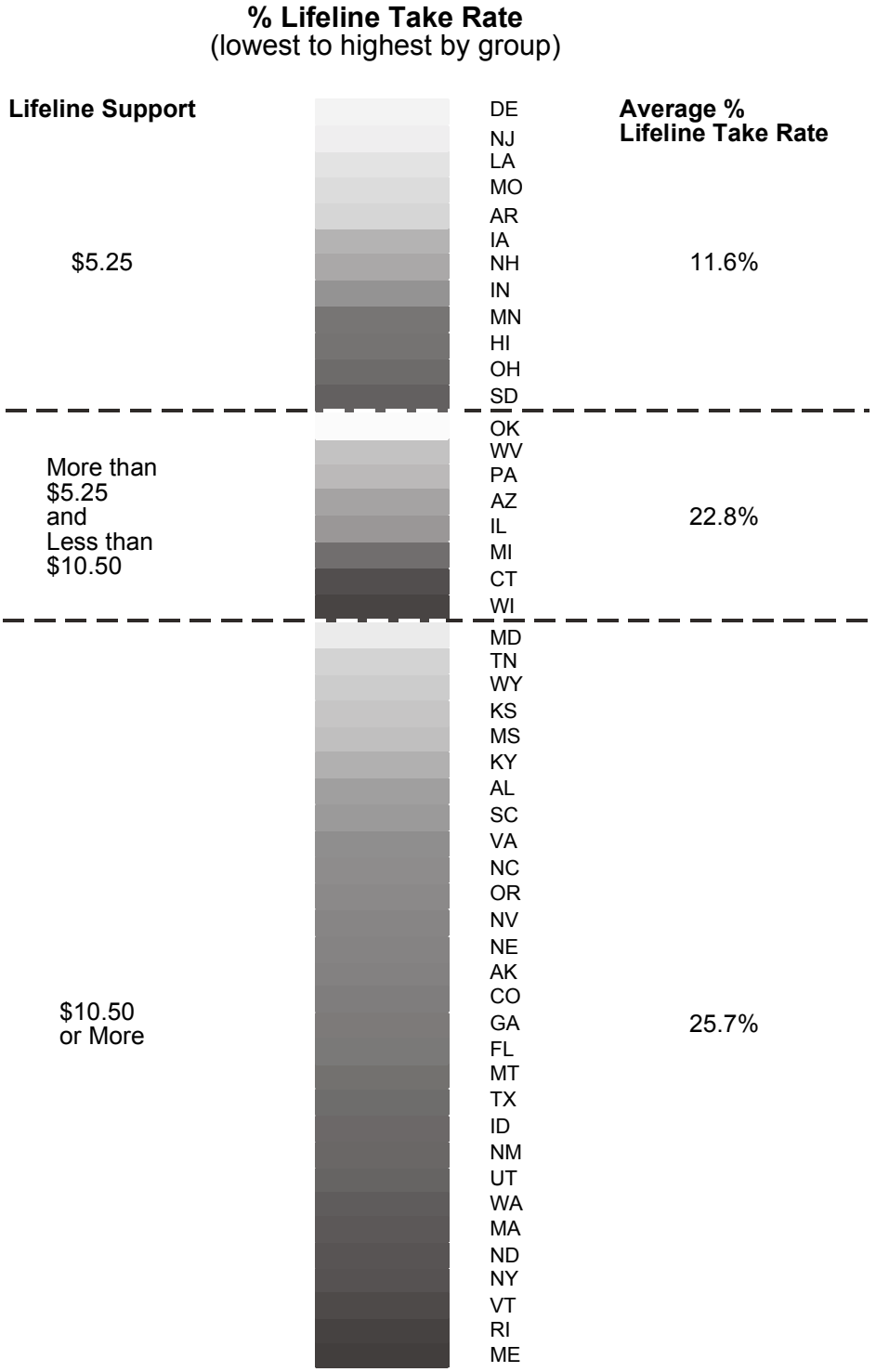
In **Figure 7**, the left-hand column shows the three groups of monthly Lifeline support. The shaded bars and state abbreviations in the center indicate the Lifeline take rates from **Figure 5**. Within each of the three groups, the shaded bars are ranked lowest to highest. The right-hand column shows the average take rate for each group.

At the minimum level of support ($5.25), on average only 11.6% of the eligible households subscribe. As the support increases, the average take rate doubles to 22.8% and to $25.7%. Simply put, the states with higher monthly Lifeline support have a greater participation in the Lifeline program.

States with higher support amounts, however, are more likely to have additional state initiatives. The doubling of the average take rate is probably due to this joint effect. With the removal of the impact of additional initiatives, the impact of support above $5.25 on the Lifeline take rate is an increase of 7%—an increase from 9.5% to 16.5%.[24]

V. Figure 7

Figure 7: 1999 Impact of the Amount of Support on the Average Lifeline Take Rate by State



Omits CA and DC whose Lifeline take rates mask the basic pattern.

If a state has an additional initiative that goes beyond the FCC's guidelines for Lifeline service, then the percent of eligible households subscribing to Lifeline service increases.

V. Figure 7

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What is the Impact of Additional State Initiatives?

States initiatives that go beyond the FCC's guidelines also increase the number of low-income households with telephone service. Another pattern emerges: if a state has an additional initiative, then the percent of eligible households subscribing to Lifeline service increases.

Figure 8 illustrates this pattern. The left-hand column in **Figure 8** indicates whether or not a state has an additional incentive that goes beyond the FCC's guidelines for Lifeline service. The shaded bars and state abbreviations in the center show the percent Lifeline take rates from **Figure 5**. Within each of the two groups, the shaded bars are ranked lowest to highest. The right-hand column shows the average take rate for both groups. **Figure 8** indicates that the Lifeline take rate almost triples from 13.1% to 39.6% when states have additional incentives.

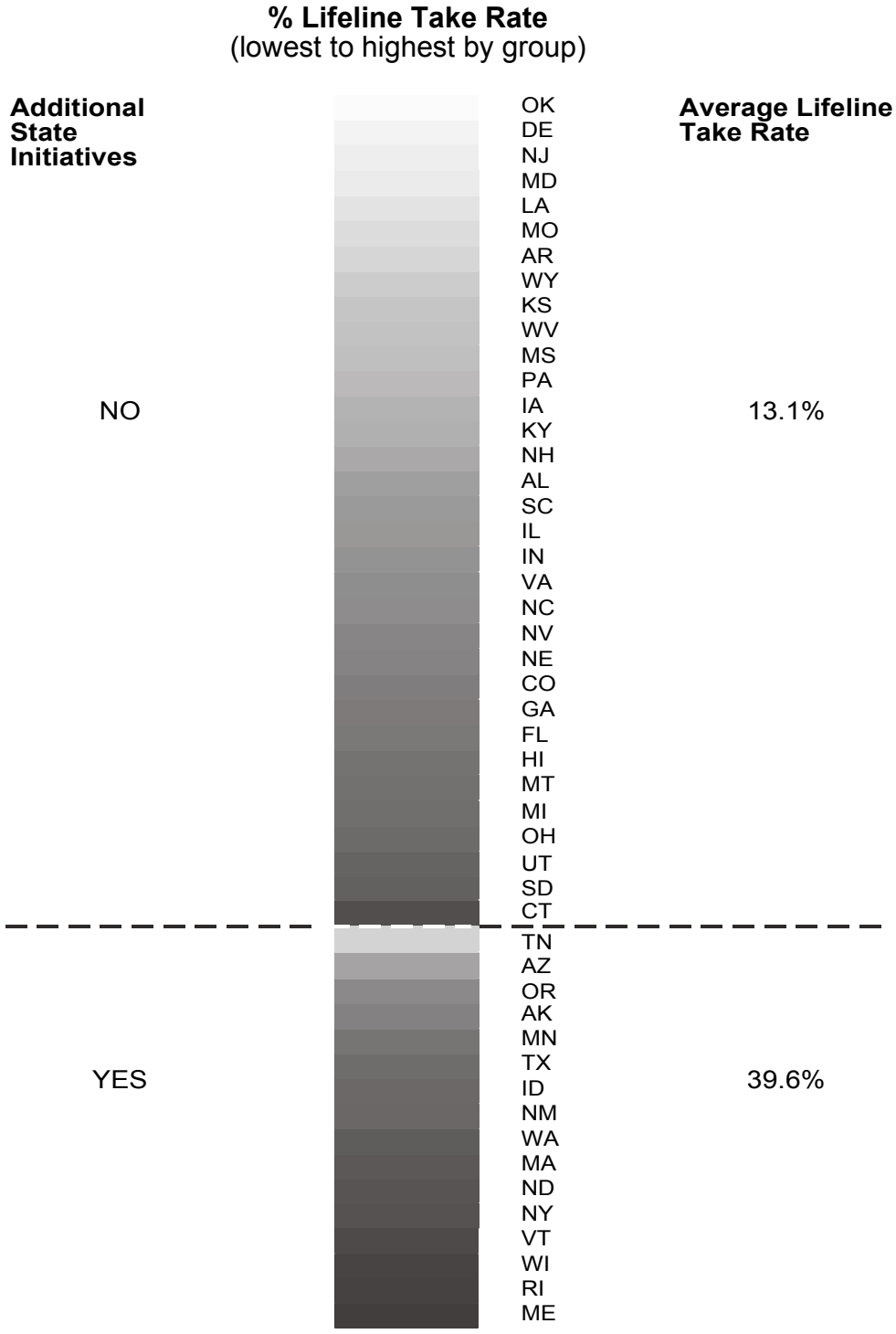
Additional state initiatives, however, are more likely to have support amounts above $5.25. The near doubling of the Lifeline take rate is probably due to this joint effect. With the removal of the impact of higher support levels, the impact of state initiatives on the Lifeline take rate is an increase of 25.3%—an increase from 9.5% to 34.8%.[25]

What is the Impact of Both Approaches?

Both of the approaches in **Figure 7** (amount of support) and **Figure 8** (additional state initiatives) increase the Lifeline take rate. However, the additional state initiatives (25.3% increase) are more important than the amount of support (7% increase) for getting eligible customers to subscribe. The combined impact of higher support and additional state initiatives raises the Lifeline take rate by 32.3%—an increase from 9.5% to 41.8%.[26]

V. Figure 8

Figure 8: 1999 Impact of Additional State Initiatives that Go Beyond the FCC's Guidelines



Omits CA and DC whose Lifeline take rates mask the basic pattern.

If a state has an additional initiative that goes beyond the FCC's guidelines for Lifeline service, then the percent of eligible households subscribing to Lifeline service increases.

V. Figure 8

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VI. Other Approaches

Other Approaches that Contribute to Increased Lifeline Service

The reasons why each of these states is successful vary. Discussions with all the states reveal that other factors are at play. Different states have adopted different approaches.

States that have relatively low Lifeline take rates might look to those states that have higher ones for useful approaches. An approach that's right for one state may not work in another. Also, the list of approaches is only part of the overall picture.[27] Given the diversity of approaches, states can pick the approaches that best fit their needs.

The lists in this section are representative. They do not include all the state initiatives and programs for assistance to low-income households for telephone service.

Types of State Initiatives

The following list only includes state programs and initiatives in effect as of 1999.

Type of State Initiatives, 1999	**Examples**
An increase in the Lifeline support above the $5.25 minimum **(Figure 7)**.	On average, the larger the increase in support, the greater the Lifeline take rate. Massachusetts increases the amount above the FCC's 1999 guidelines of a maximum of $10.50.[28] One small local company in New Mexico provides a $12.99 discount.[29]
Additional state programs and initiatives.	California has five state programs to increase penetration, one of which specifically targets support to low-income households.[30]
Pre-existing state programs to low-income assistance for telephone service.	States with their own programs before the FCC's Lifeline program, had a head start on the issues associated with signing up Lifeline customers. For example, Texas had a program in place before the FCC set nationwide guidelines.[31]
Self certification for Lifeline service.	California also allows customers to call and order Lifeline service with no verification check.[32] In South Dakota, the largest local company also uses self-certification.[33]

VI. Other Approaches, cont.

Type of State Initiatives, 1999	Examples
Extension of the FCC's eligibility requirements to include a broader range of customers.	This approach varies. It includes the addition of programs or the extension of eligibility rules for those programs covered by the FCC's guidelines. Minnesota uses age and disability, in addition to income, to determine eligibility. [34] Idaho changed eligibility to reach more people.[35] Arizona includes seniors and extends disabilities and low-income requirements.[36] Wisconsin's Homestead Tax Credit includes low-income families and individuals that receive no federal or state general assistance. This credit also applies to individuals and/or households with no taxable income.[37] Tennessee's eligibility requirements extend to recipients with income that is 125% of the annual federal poverty guidelines.[38]
Free access to Lifeline service information.	In California, this includes "rates, service activation for termination, service repair, and billing inquiries.[39]
Competitively neutral marketing of Lifeline service.	California has a Lifeline marketing board. [40]
Bonus to sales force for signing Lifeline customers.	In addition to call waiting, call forwarding, and voice mail, sales representatives at the local telephone company in Massachusetts receive a bonus for signing up Lifeline customers. [41]
No deposit required for service.	Tennessee requires no deposit for Lifeline service. [42]
Community outreach programs.	These can be done by the state commission, by the companies providing service, or by both. The District of Columbia and Rhode Island target community centers, public schools, churches, job and health fairs, community festivals, senior citizen events, and neighborhood commission meetings and hand out flyers describing the Lifeline programs and eligibility requirements. Advertising is also provided in the community newspapers.[43] North Dakota has an outreach program to its Native American reservations.[44] Oregon has an outreach program for town halls and group meetings with special programs.[45] Vermont requires local exchange companies to send to all customers annual notices of how to apply for Lifeline service. [46]

VI. Other Approaches, cont.

Type of State Initiatives, 1999	Examples
Direct contact with individual eligible customers.	This contact can be either by mail or in person. One local company in Alaska went house to house to sign up people. "It made a material difference."[47] Maine increased its Lifeline participation by 11% (7,122 new participants) through flyers and personalized letters sent to eligible customers.[48] In South Dakota, the largest local company sends a letter to every new customer to make them aware of the Lifeline program. [49] Wisconsin works with the Department of Revenue and the Department of Workforce Development to mail information on Lifeline directly to eligible subscribers.[50]
Cooperation between the state commission and other agencies and/or local companies, which have data bases on eligible customers.	For example, in North Dakota, the human services department works with the local company to send out certificates to customers. [51] Maine increased its Lifeline penetration by working in concert with its social service agencies.[52] New York has an automatic enrollment program with a computer match between their Department of Social Services and their largest local company's data base.[53] The Tennessee Regulatory Authority uses the Department of Human Services database for reverification to determine who's still eligible. [54] In Washington, the telephone company representative determines Lifeline eligibility for a customer with a short call to the social service agency that determines which households are eligible. [55] Wisconsin works with the Department of Revenue and the Department of Workforce Development to verify eligible Lifeline subscribers. [56]
Easy application and verification process for service.	In Vermont, when eligible customers enroll in the general assistance programs, these customers are asked whether they want Lifeline service. [57] Washington has an application process that takes three minutes on average.[58] In Wisconsin, when a customer orders service, the local company includes Lifeline service in the choices. For those customers who order Lifeline, the company automatically performs verification.[59]

VI. Other Approaches, cont.

Type of State Initiatives, 1999	Examples
Company reports on the Lifeline program.	The Public Service Commission of the District of Columbia requires written monthly reports on outreach and newspaper advertising and quarterly reports on the number of Lifeline subscribers from the local company.[60]
Do not disconnect (DND) policies in tandem with other Lifeline initiatives.	Responses indicate that it was important to enforce this policy. Many states have DND policies.[61] For example, Rhode Island allows Lifeline customers to stay on the network provided they pay their local service in full on a monthly basis.[62] Ten years ago in North Dakota, the DND policy arose with the concern to keep native American households on the telephone network. North Dakota's DND program was implemented statewide.[63] In Oregon, Lifeline customers who have their general assistance benefits terminated, also have their Lifeline service terminated. However, these customers can request a hearing on the termination of their Lifeline Service.[64] Tennessee has a DND policy for residential service. [65] Wisconsin has a DND program that attempts to keep residential customers at the highest level of monthly services that they can afford and avoids disconnection. [66]
Slow down of the disconnection process.	In Texas, when a Lifeline customer has a past due bill, they must be offered a payment schedule by the company. [67]

Some Future State Initiatives

These legislative or regulatory initiatives are for 2000 and beyond.

Future Initiatives for 2000 and Beyond	Examples
New legislation or new programs to promote overall penetration of telephone service or Lifeline subscription.	New Michigan legislation ensures that each person has access to just, reasonable, and affordable basic residential telecommunications service by promoting competition and supplementing state and federal law regarding antitrust, consumer protection, and fair trade. [68] ■ The statute gives the Michigan Public Service Commission (MPSC) authority to revoke the license of telecommunications providers who do not offer service to all customers in the geographic area of its license within two years.[69] ■ The statute prohibits mandatory minimum monthly or flat-rate charges for toll calls. [70] ■ The MPSC may also establish an intrastate universal service fund to subsidize customers of "supported telecommunications services." [71] Wyoming passed legislation in 2000 to make it easier for eligible Lifeline and Link Up customers to subscribe to these services.[72]
Revised definition of basic monthly service as new services become more widely used.	California's goal is to "avoid some people having inferior access to information than others."[73]
Extension of the FCC's eligibility requirements to include a broader range of customers.	In Pennsylvania an order will increase Lifeline eligibility to 150% of the federal poverty guidelines. [74] Texas is in the process of revising its rules to set Lifeline eligibility at 125% of the federal poverty level.[75]
Community outreach programs.	Starting in May 2000, the Puerto Rico Telecommunications Regulatory Board is conducting lectures at every town hall and plans to distribute half a million pamphlets to inform customers of Lifeline, Link Up, and how to contact the Board.[76] Tennessee will provide all information available on Lifeline and Link Up in Spanish and other languages. It will also run public service announcements on radio and television. [77] Tennessee plans to establish a Manager of Consumer Outreach position who would solely concentrate on the provision of consumer information—primarily information on Lifeline and Link Up.[78]

VI. Other Approaches, cont.

Future Initiatives for 2000 and Beyond	Examples
Direct contact with individual eligible customers.	Illinois will mail enrollment information on Lifeline and Link Up services to its Medicaid recipients. [79] Local telephone companies in Illinois will conduct a survey on which households lack telephone service and the reason why. [80] Tennessee will mail information on Lifeline and Link Up services to its identified low-income households (approximately 265,000). The commission also plans to send brochures with information on its DND policy to all residential customers.[81]
Competitively neutral marketing of Lifeline service.	Tennessee will invite eligible companies that is does not regulate to inform their customers about Lifeline and Link Up services. [82] Wisconsin is implementing programs that allow community groups to market Lifeline and Link Up.[83]
Cooperation between the state commission and other agencies and/or local companies, which have data bases on eligible customers.	Illinois is working with LIHEAP organizations to simultaneously enroll eligible participants for both LIHEAP and Lifeline/Link Up programs. [84] Tennessee's Department of Human Services will commit to proactively provide Lifeline and Link Up information to eligible subscribers. [85] Wyoming's commission is working with the Department of Family Services and local telephone companies to make it easier for eligible customers to subscribe to Lifeline and Link Up services.[86]

VI. Other Approaches, cont.

Additional State Initiatives Other than Lifeline/Link Up

Many states had initiatives and programs that focused on other areas of universal service. These indicate that one size does not fit all in terms of state needs.

Non-Lifeline/Link Up State Initiatives, 1999	**Examples**
Focus on service for schools and libraries.	In Florida, a 1995 legislative initiative provided assistance for advanced telecommunications services and network connections for schools, libraries, and hospitals.[87] In Iowa, a state-run network provides low-cost communications services to schools, libraries, and hospitals. [88] In Louisiana, schools are charged residential rates instead of business rates for local phone service. An additional statewide program gives a discount to schools, libraries, and hospitals for dedicated access to the Internet.[89] Wisconsin has a program that provides schools and libraries with reduced rates for data lines and for video links. [90]
Statewide averages keep local rates low across the state.	Indiana, Idaho, Iowa, Kansas, Nebraska, Oklahoma, Utah, and Washington.[91]
Competitively neutral support to companies.	Wyoming requires that all telecommunications support is explicit as a credit on customer bills. This includes support for rural areas where the cost of providing service is higher than average.[92]

VII. Notes

Notes

1. *Telecommunications Act of 1996*, Pub. L. No. 104-104, Stat.56 [hereinafter referred to as the *Act of 1996*], codified at 47 U.S. C. §§151 et seq., §254(a) Universal Service, Procedures to Review Universal Service Requirements.

2. *Ibid.,* §254(j) Lifeline Assistance.

3. In June of 1999, the FCC issued new rules to extend Lifeline support beyond the discussion in this paper. The Coalition for Affordable Local and Long Distance Service (CALLS) proposal provides an "Adjustment of the Lifeline Assistance universal service support mechanism to shield low-income customers from increases in the residential SLC [Subscriber Line Charge]." FCC, *In the Matter of Access Charge Reform*, CC Docket No. 96-262; *Price Cap Performance Review for Local Exchange Carriers*, CC Docket No. 94-1; *Low-Volume Long-Distance Users*, CC Docket No. 99-249; and *Federal State Joint Board on Universal Service*, CC Docket No. 96-45; *Sixth Report and Order in CC Docket Nos. 96-262 and 94-1; Report and Order in CC Docket 99-249; and Eleventh Report and Order in CC Docket No. 94-45*, [hereinafter referred to as the *CALLS Order*], FCC Order No. 00-193, May 31, 2000, page 14. In addition, in June 2000,

   "the FCC has amended its universal service rules to substantially reduce the bills of people on tribal lands by providing additional, targeted support to carriers. Specifically, the order:

   - Increases the discount off the local phone bill that eligible low-income consumers on tribal lands can receive under the current federal Lifeline program by $25. Under the new rules, carriers may receive between $30.25 - $32.85, depending on various factors such as state matching. As a result, depending on their current rate levels, most customers will receive basic local phone service for $1 a month; all customers should see service under $10 a month.
   - Increases the assistance available for the costs of initiating service provided under the current Link Up program by $70 to a total of $100 per customer. This will reduce the initial connection charges and line extension costs associated with initiating phone service to income eligible customers on tribal lands.
   - Broadens the consumer qualification criteria for Lifeline and Link Up so that means-tested, or income-based, programs in which low-income tribal members are more likely to participate in are included.
   - Requires eligible telecommunications carriers to publicize the availability of Lifeline and Link Up support in a manner designed to reach those likely to qualify for those discounts."

   FCC News Release, "Federal Communications Commission Takes Steps to Promote Access to Telecommunications on Tribal Lands," June 8, 2000. Website: http://www.fcc.gov/Bureaus/Wireless/ News_Releases/2000/nrwl0016.html on July 8, 2000.

4. Including the District of Columbia, Puerto Rico, and the Virgin Islands.

5. See Carol Weinhaus, Tom Wilson, Gordon Calaway, *et al*., *Calculations and Sources for Closing the Gap: Universal Service for Low-Income Households* [hereinafter referred to as *Calculations and Sources*], Presentation at the July 2000 National Association of Regulatory Utility Commissioners (NARUC) meeting, Los Angeles, CA, Telecommunications Industries Analysis Project Work Group, Boston, MA, July 22, 2000.

6. In statistical terms, a significant negative correlation exists (**--**0.60) between percent of households with telephones and percent of low-income households. See discussion in **Section II, What is the Impact of Income on Telephone Service?**

7. In statistical terms, no correlation exists (**--**0.12) between the percent of eligible customers that subscribe to Lifeline service and the percent of low-income households. See discussion in **Section IV, Does a State's Need Affect the Lifeline Take Rate?**

8. Including the District of Columbia, Puerto Rico, and the Virgin Islands.

9. For details, see *Calculations and Sources*.

10. *Ibid*.

11. See **Section VI, Other Approaches**, for examples.

12. These same general assistance programs also qualify customers for Link Up support. For details, see *Calculations and Sources*.

13. The figures omit Puerto Rico and the Virgin Islands because data were unavailable for the set of calculations. See also *Calculations and Sources*.

14. For example, Native Americans on average have lower telephone penetration. In 1990, "the telephone penetration rates for individuals living on tribal lands at that same income level [below $5,000] averaged approximately 46.6 percent." FCC, *In the Matter of Extending Wireless Telecommunications Services to Tribal Lands*, WT Docket No. 99-266, *Notice of Proposed Rulemaking*, FCC Order No. 99-205, August 18, 1999, page 4. "In individual cases, penetration rates are often lower still. For example, the penetration rate is 16.1 percent on the San Carlos reservation in Arizona, and 18.4 percent on the Navajo reservation and trust lands in Arizona, New Mexico, and Utah." *Ibid.*

    See also, U.S. Census Bureau, Statistical Brief, *Housing of American Indians on Reservations—Equipment and Fuels*, Website: http://www.census.gov/apsd/ www/statbrief/sb95_11.pdf on July 8, 2000. "The majority of American Indian homes on reservations (53 percent) did *not* have a telephone."

    See also, James McConnaughey and Wendy Lader, *Falling Through the Net II: New Data on the Digital Divide*, National Telecommunications and Information Administration. Website: http://www.ntia.doc.gov/ntiahome/net2/falling.html on July 8, 2000.

15. The penetration data is on a statewide basis. FCC, *Monitoring Report on Universal Service*, CC Docket No. 98-202, December 1999, [hereinafter referred to as *December Monitoring Report*], Section 6, "Subscribership & Penetration," Table 6.2, page 6-12. Website: http://www.fcc.gov/Bureaus/Common_Carrier/ Reports/FCC-State_Link/ Monitor/mrd99-0.pdf on April 12, 2000. Some groups within the total population have higher or lower penetration rates than the statewide average.

16. Low-income households have incomes of $9,999 or less. High-income households have incomes of $40,000 or more. Alexander Belinfante, *Telephone Penetration by Income by State* [hereinafter referred to as *Telephone Penetration*], FCC, Common Carrier Bureau, Industry Analysis Division, Washington, DC, March 2000, Table 4, "Total Number of Households," page 42. Website: http://www.fcc.gov/Bureaus/CommonCarrier/Reports/FCC-StateLink/IAD/ pntris99.pdf on April 3, 2000.

17. The statistical comparison of percent penetration with percent low-income households gives a negative correlation (**--**0.60). The statistical comparison of higher-income households gives a positive correlation of (0.43). The drop associated with low-income households is **--**0.296 and the rise associated with high-income households is 0.159.

    See *Calculations and Sources* for these comparisons.

18. It should be noted that not everyone who's eligible subscribes to Lifeline service. Some households don't have any service at all; other households prefer to take other forms of local service.

19. For further details, see *Calculations and Sources*.

20. Supplemental Security Income (SSI), Medicaid, Foods Stamps, Energy assistance, and Public Housing.

21. In addition, the calculated take rate does not take into account that some states have broadened their eligibility requirements beyond the federal guidelines. Therefore, the calculated take rate is overstated in these cases.

22. California has five state programs to increase penetration, one of which specifically targets support to low-income households. California Public Utilities Commission (PUC), *Universal Service Report to the Governor and the Legislature: In Response to Public Utilities Code Section 739.3(e) and (f)* [hereinafter referred to as *California Universal Service Report*], San Francisco, CA, December 1, 1999, page 2; and personal communications, June 2000. California's calculated take rate of 169.3% is based on only one of the federal general assistance programs.

    For the District of Columbia, the data set used to determine the percent of households eligible for Low-Income Home Energy Assistance Program (LIHEAP) understates the actual number. The *Current Population Survey* has 3.3% of the District's households eligible for LIHEAP. The DC Energy Office (DCEO) has 5.9% (14,046 LIHEAP households divided by 238,286 total households). Calculations that use the DCEO number produce a Lifeline take rate of 75.4%. Calculations that use the *Current Populations Survey* produce a Lifeline take rate of 133.0%.

    U.S. Bureau of the Census, *Current Population Survey* [hereinafter referred to as *CPS*], 1998 data; and personal communication with the FCC, May 4, 2000. DCEO, personal communication, July 10, 2000. Also see **Section VI, Other Approaches**, for other factors that may explain why California and the District of Columbia have Lifeline take rates above 100%.

23. For example, with a positive correlation, those states with a high Lifeline take rate would have a high percent of low-income households. The reverse—high Lifeline take rate and low percent of low-income households—would show a negative impact. Neither of these is the case since the correlation is **--**0.12.

24. For background calculations, see *Calculations and Sources*, Section IV, Figure 9, 1999 Lifeline Take Rate Regression, *Lifeline Take Rate by Groups for Support and for Initiatives*.

25. *Ibid.*

26. *Ibid.*

27. One major factor, not included, is price. In some states, low prices for residential services may mean that eligible Lifeline customers don't take it. Pricing data are not available on a statewide basis.

28. Massachusetts Department of Telecommunications and Energy (DTE), personal communication, June 2000. In 1997, Massachusetts raised the discount from $9.50 to $13.00 by accepting an additional $3.50 in federal support and continuing $6.00 in state support. See D.P.U. 97-103, at 9-10 (12/23/97).

29. New Mexico Exchange Carrier Group, personal communication, June 19, 2000.

30. *California Universal Service Report*. In this paper, California's calculated Lifeline take rate is based on only one of the federal general assistance programs.

31. Texas PUC, personal communication, June 19, 2000.

32. California PUC, personal communication, June 2000.

33. US West, personal communication, June 19, 2000.

34. Minnesota Public Utilities Commission (PUC), personal communication, June 15, 2000.

35. Idaho Public Utilities Commission (PUC), personal communication, June 15, 2000.

36. Arizona Corporation Commission, personal communications, June 15, and 28, 2000. A seniors program applies to customers of all local telephone companies. Another program applies to medically eligible customers of the largest local telephone company.

37. Wisconsin Public Service Commission(PSC), personal communications June 15 and July 7, 2000.

38. Tennessee Regulatory Authority (TRA), personal communications, June 16, June 19, and July 7, 2000.

39. *California Universal Service Report*, page 6.

40. *Ibid*., pages 7 and 8.

41. Massachusetts DTE, personal communication, June 2000. In 1992, the DTE approved a proposal by Bell Atlantic to, among other actions, expand its sales incentive program for residence service centers to include the subscription of eligible customers to the Lifeline and Link Up programs. See D.P.U. 92-100, at 6 (10/28/92).

42 TRA, personal communications, June 16 and June 19, 2000.

43. Bell Atlantic, personal communications, June and July, 2000.

44. North Dakota Public Service Commission (PCS), personal communication, June 15, 2000.

45. Oregon PUC, personal communication, June 19, 2000.

46. Vermont Department of Public Service (DPS), personal communications, June 16, and 26, 2000.

47. Regulatory Commission of Alaska, personal communication, June 15, 2000. See also FCC, In the Matters of Federal-State Joint Board on Universal Service; Promoting Deployment and Subscribership in Unserved and Underserved Areas, Including Tribal and Insular Areas; Western Wireless Corporation, Crow Reservation in Montana; Smith Bagley, Inc.; Cheyenne River Sioux Tribe Telephone Authority; Western Wireless Corporation, Wyoming; Cellco Partnership d/b/a/ Bell Atlantic Mobile, Inc.; and Petitions for Designation as an Eligible Telecommunications Carrier and for Related Waivers to Provide Universal Service; CC Docket No. 96-45, Twelfth Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, June 30, 2000, pages 41 and 42.

    United Utilities, Inc. (UUI) is an Alaskan Native-owned telephone company that serves 58 villages, most of which are on tribal lands. Through a number of steps, UUI increased its Lifeline subscribers from 395 customers to 1,263 customers. The steps are as follows:

    a. An increase in the federal/state support amount for Lifeline and Link Up gave the company financial incentive to sign up subscribers.

    b. UUI targeted 26 communities where penetration was low.

    c. UUI met with each tribal council to obtain support to sign up customers. This included establishing a local representative.

    d. Armed with a facilities map, UUI employees and local representatives determined which buildings lacked telephone service and which of these were households and not for other purposes (such as storage).

    e. For households without service, contact was made and a meeting date set, either at the tribal council or in person. At this meeting, representatives explained the Lifeline and Link Up programs. This included translation of telephone services into Yupik, the Native language.

    f. For example, once customers understood that they could block long distance calls, Lifeline service became attractive. The ability to avoid long distance charges is a benefit in households with multiple families and with a single telephone line. Approximately two-thirds of the customers who signed up were eligible for Lifeline. Also, nearly two-thirds of all UUI's Lifeline customers had their telephones blocked from originating long distance calls (called "toll blocking").

    g. UUI also waived its service order and installation fees.

48. Derek Davidson, "Memorandum Re Summary of the MTEF Lifeline Initiative, "[hereinafter referred to as *Maine PUC Memo*], Maine Public Utilities Commission (PUC), February 25, 2000. The participation rate for Lifeline services had further increased to 14% (8,970 new participants) by March 31, 2000. Maine PUC, personal communication, July 6, 2000.

49. US West, personal communication, June 19, 2000.

50. Wisconsin Public Service Commission (PSC), personal communication, July 7, 2000.

51 North Dakota PSC, personal communication, June 15, 2000.

52 *Maine PUC Memo.* Maine sent 134,000 personalized letters and flyers to every person in the state known to be eligible for Lifeline services. Recipients of the letters were determined using databases of various state and local aid agencies that administer the programs that determine eligibility for Lifeline services. Each of these agencies also mailed the letter or flyer to its respective client list. Maine PUC, personal communication, July 6, 2000.

53. New York Public Service Commission (PSC), personal communication, June 15, 2000.

54. TRA, personal communications, June 16, June 19, and July 7, 2000.

55. The Washington Telephone Assistance Program (WTAP) application process consists of the following three steps:

    a. A potential client calls their local telephone company.

    b. Using a toll-free number, the telephone company calls WTAP.

    c. WTAP verifies eligibility allowing the telephone representative to add WTAP to the client's telephone account immediately.

    Washington Department of Social & Health Services (DSHS), personal communications, June 16, June 26, and June 28, 2000.

56. Wisconsin PSC, personal communication, July 7, 2000.

57 Vermont DPS, personal communications, June 16 and 26, 2000.

58. Washington DSHS, personal communications, June 16, 26, and 28, 2000.

59. Wisconsin PSC, personal communication, July 7, 2000.

60. Bell Atlantic, personal communications, June 29 and July 10, 2000.

61. In the *TIAP Survey*, if a state specifically stated that its DND policy was related to its Lifeline service, then this counted as a "Yes" for an additional state initiative that extended beyond the FCC's guidelines.

    For information on DND policies in general, see *Telephone Penetration*, pages 5, 6, 8, and 9. The FCC defines a DND policy as "a policy where local telephone companies are prohibited from disconnecting their consumers from the local telephone network as long as the consumers pay the local portion of their telephone bills." *Ibid.*, page 5.

62. Bell Atlantic, personal communication, June 29, 2000.

63. North Dakota PSC, personal communications, June 15, June 29, and July 7, 2000. The DND policy was initiated by a petition to the PSC from a legal assistance attorney representing residents of one of North Dakota's Native American reservations who were customers and members of a rural telephone cooperative. The petition started a lengthy rulemaking process that resulted in the DND policy being implemented through rules applicable to all companies statewide. The process itself was a good example of industry/government collaboration to reach a public interest objective. A subsequent legislature revised the cooperative exemption statute to preserve the applicability of the PSC's DND rules to cooperative telephone companies, even though those companies are otherwise substantially deregulated.

64. Oregon Public Utility Commission (PUC), personal communication, June 19 and June 26, 2000. In the Oregon Telephone Assistance Program (OTAP), customers who are terminated can request a hearing.

65. TRA, personal communication, July 7, 2000.

66. Wisconsin PSC, personal communication July 7, 2000. The Telecommunications Customer Assistance Program (TelCAP) allows disconnection only if customers don't pay their bill for local monthly service.

67. Texas Public Utility Commission (PUC), personal communication, June 19, 2000.

68. HB 5721, passed by the Michigan legislature on June 20, 2000; signed by Governor Engler on July 17, 2000. Also, Michigan, Public Service Commission (MPSC) personal communication, July 12, 2000.

69. *Ibid.*, Sec. 303.(I).

70. *Ibid.*, Sec. 312.(5). A flat rate or monthly charge may be allowed in connection with an optional discount toll calling plan.

71. *Ibid.*, Sec. 316A(1)(c).

72. Wyoming Public Service Commission (PSC), personal communications July 13 and July 14, 2000.

73. *California Universal Service Report*, page 5. In 2000, the California Commission plans to review the definition of basic service, page 6.

74. Pennsylvania Public Utility Commission (PUC), personal communications, June 15 and July 7, 2000. *Pennsylvania PUC, Joint Petition of Nextlink Pennsylvania, Inc.; Senator Vincent J. Fumo; senator Roger Madigan; Senator Mary Jo White; the city of Philadelphia; The Pennsylvania Cable & Telecommunications Association; RCN Telecommunications Services of Pennsylvania, Inc; Hyperion Telecommunications, Inc., ATX Telecommunications; CTSI, Inc.; MCI Worldcom; and AT&T Communications of Pennsylvania, Inc. for Adoption of Partial Settlement Resolving Pending Telecommunications Issues*, Docket No. P-00991648; and *Joint Petition of Bell Atlantic Pennsylvania, Inc.; Conectiv Communications, Inc.; Network Access Solutions; and the Rural Telephone Company Coalition for Resolution of Global Telecommunications Proceedings*, Docket No. P-00991649; *Opinion and Order*, September 30, 1999. This is referred to as the Pennsylvania PUC's *Global Order*.

75. Texas PUC, personal communication, June 19, 2000.

76. Puerto Rico Telecommunications Regulatory Board, personal communication, July 10, 2000.

77. TRA, personal communication, July 7 and July 12, 2000. These unregulated companies include telephone cooperatives. In 95 Tennessee counties, 27% are served entirely, or in part, by a telephone cooperative. Report to the TRA, "Strategies to Promote Link-up and Lifeline Telephone Programs."

78. TRA, personal communication, July 12, 2000.

79. Illinois Commerce Commission, personal communication, July 7, 2000.

80. *Ibid.*, personal communication, July 7, 2000.

81. TRA, personal communication, July 7 and July 12, 2000.

82. TRA, personal communication, July 7 and July 12, 2000.

83. Wisconsin Public Service Commission (PSC), personal communication, July 7, 2000.

84. Illinois Commerce Commission, personal communication, July 7, 2000.

85. TRA, personal communication, July 12, 2000. Actions include disseminating brochures, displaying posters, and providing proof of benefit directly to the local exchange carrier to qualify eligible subscribers.

86. Wyoming PSC, personal communications July 13 and July 14, 2000.

87. Florida Public Service Commission (PSC), personal communications, June 15 and July 3, 2000. Florida's *1995 Education Facilities Infrastructure Improvement Act*, provided a one-time opportunity for an eligible facility to receive up to $20,000 for network connections and for advanced telecommunications services.

88. The Iowa Communications Network (ICN), established under Iowa Code ch 8D, consolidates communications traffic for state agencies, public and non-public schools, non-profit institutions of higher education, hospitals, federal agencies, and U.S. post offices on a state-run network to provide essentially all forms of telecommunications services.

89. BellSouth, personal communications, June 15 and June 29, 2000. The Education Discount Program allows qualified schools, libraries, and hospitals to subscribe to limited quantities of DS0 and/or DS1 private line circuits and frame relay at discounts approaching 67% for use in accessing the Internet.

90. The TEACH Wisconsin program put a cap on these rates. Wisconsin PSC, personal communication, July 7, 2000.

91. Indiana Utility Regulatory Commission, personal communications, June 16 and June 27, 2000. Indiana has two support mechanisms for small telephone companies: the Indiana High Cost Fund and the Transitional DEM Weighting Fund.

    Idaho PUC, personal communication, June 15, 2000.

    Iowa Utilities Board (IUB), personal communication, June 2000.

    Kansas Corporation Commission, personal communication, June 15, 2000.

    Nebraska Public Service Commission (PSC), personal communication, June 15, 2000.

    Oklahoma Corporation Commission, personal communication, June 16, 2000.

    Utah Public Service Commission (PSC), personal communication, June 16, 2000.

    Washington DSHS, personal communication, June 16, 2000.

92. Wyoming PSC, personal communications July 13 and July 14, 2000.